REMARKS

The Examiner is thanked for the careful examination of the application. However, in view of the remarks that follow, the Examiner is respectfully requested to reconsider and withdraw the outstanding rejections. The independent claims have now been amended to indicate that the target pixel is binarized into one of two data values.

Art Rejections:

Claims 1, 2, 6-8, 12, and 22-24 have been rejected under 35 U.S.C. §102(e) as being allegedly anticipated by U.S. Patent No. 6,766,056, hereinafter *Huang*.

One of the objects of the present invention is to provide an *efficient* method for determining whether or not an image has a specified pattern. In one embodiment, the present invention is used for determining whether or not paper money is being duplicated. In order to speed up and simplify the process, the number of pixels considered at any one time is reduced. However, in view of the fact that the image being processed, e.g., money, may fade or discolor after time, a reasonable number of pixels should be considered in order to increase accuracy. See, for example, the first full paragraph on page 14 of the specification.

In one embodiment, the present invention achieves these goals by selecting certain pixels and binarizing the target pixel into one of two data values. As can be seen in Figures 5 and 6, a target pixel and pixels specifying conditions are illustrated. Only the target pixel and other related pixels satisfying certain conditions are used as the basis for the color data when binarizing the target pixel into one of two data values.

In order to minimize the number of related pixels selected, the present invention includes a storage unit for storing a first condition that defines absolute positions of pixels in the image and a second condition on positions of pixels relative to a target pixel.

In *Huang,* the eight bit image data 21 is fed into the pixel buffer pipe 42. The image data 21 is sub-sampled in accordance with instructions from the sub-sample control 41, and data concerning the "lag pixels", i.e. pixels 4 – 7, are sent to the threshold determining unit 45, so that the threshold determining unit 45 can set a foreground threshold value. See column 7, lines 5 – 7. Based on the threshold value, the "current pixel" 0 is encoded into a data value from 0 to 7, which is expressed by 3 bit data. See column 7, lines 52 through 65.

To more clearly distinguish the present invention from *Huang*, each of the independent claims of the present application has been amended to indicate that the binarization unit binarizes the target pixel into one of two data values based upon a color data of the target pixel and that of at least one related pixel to the target pixel in the image. The binarized data value can be efficiently expressed by one bit data. In contrast to the present invention, *Huang* uses three bit data. Accordingly, the present invention is more efficient than *Huang*.

Accordingly, all three independent claims 1, 8, and 12 distinguish over *Huang*.

Claims 4 and 10 have been rejected under 35 U.S.C. §103(a) as being unpatentable over *Huang* in view of U.S. Patent No. 5,434,953, hereinafter *Bloomberg*. The Examiner relies upon *Bloomberg* for its alleged teaching that a typical sub-sampling operation involves dividing an image into square blocks of pixels and then selecting a predetermined pixel from each block, resulting in a

sampling of every Nth pixel from the original image. However, the Examiner does not allege that *Bloomberg* selects the pixel in each block based on a fixed or absolute positional criteria. In fact, *Bloomberg* teaches that the selected pixel is selected based on criteria other than absolute position. See column 5, lines 64-66, and claim 1. Accordingly, *Bloomberg* does not overcome the deficiency of the *Huang* with regard to the rejections set forth and discussed above. Accordingly, Applicant submits that the combination is inappropriate and should be withdrawn.

Claims 3 and 9 have been rejected under 35 U.S.C. §103(a) as being unpatentable over *Huang* in view of U.S. Patent No. 5,687,252, hereinafter *Kanno*. The Examiner relies upon *Kanno* for its teaching of a number of different binarization processes that may be carried out in order to binarize image data. However, *Kanno* does not overcome the deficiency of the remaining references with regard to the rejections set forth and discussed above.

Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw the rejections of claims 1-12 and 22-24 in view of the foregoing remarks.

In the event that there are any questions concerning this response, or the application in general, the Examiner is respectfully urged to telephone the undersigned attorney so that prosecution of the application may be expedited.

Respectfully submitted,

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